Managing PowerShell Gallery

…the pragmatic way

Agenda

- About PowerShell (Gallery) repository
- Why having an own repository?
- Types of repositories
- Making an -internal- repo effective
- Q&A / Discussions

Get-Person -Short

Andreas Bellstedt

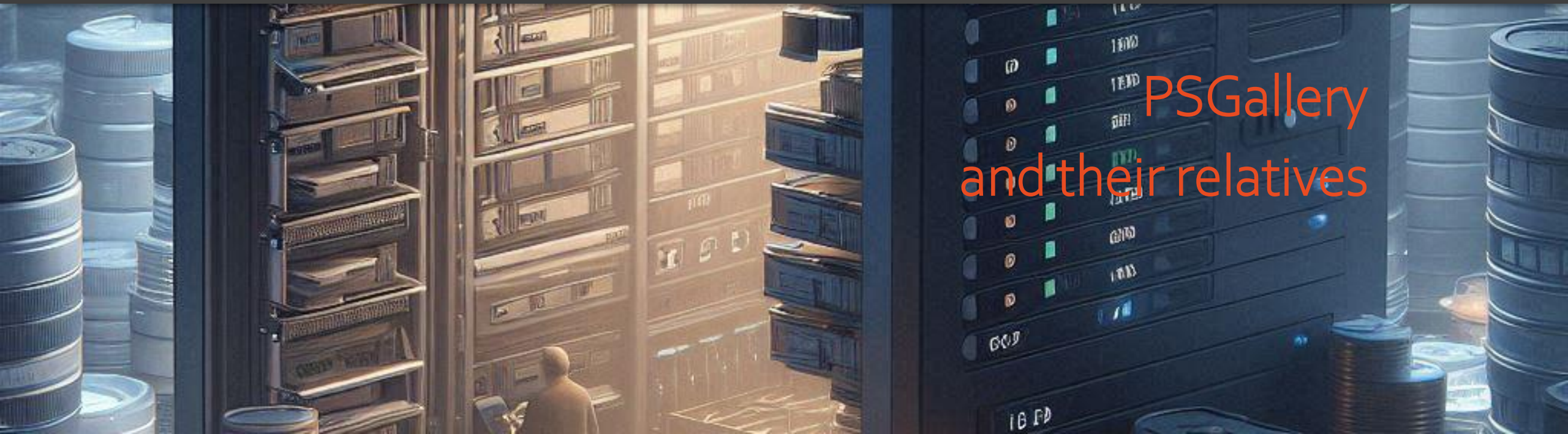
 @AndiBellstedt
 @andibellstedt.bsky.social
 github.com/AndiBellstedt
 https://www.linkedin.com/in/andreasbellstedt

IT infrastructure guy and PowerShell fellow

Microsoft Infrastructure

Security

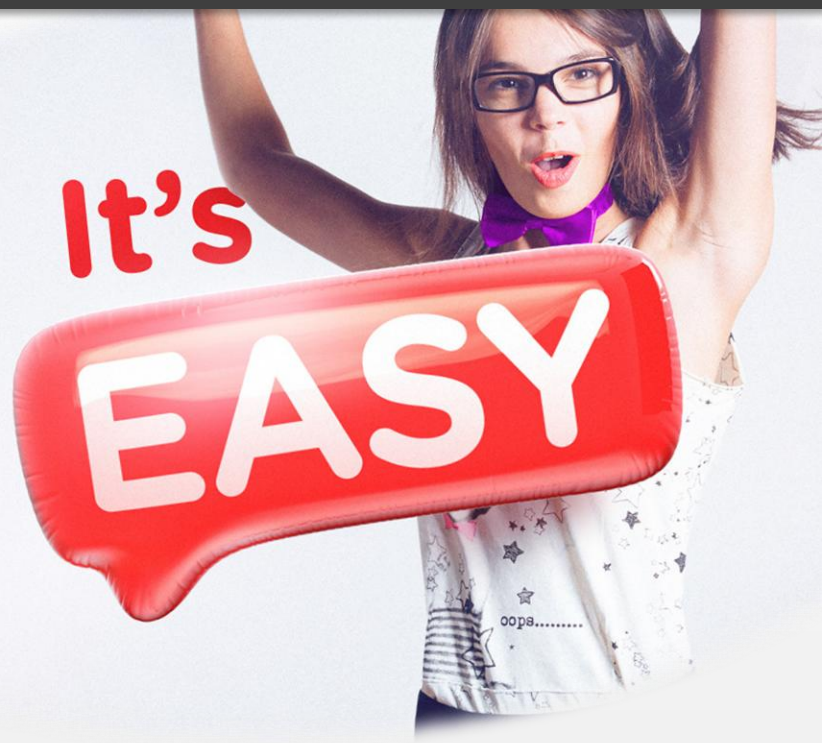
PowerShell repositories



PSGallery and their relatives

Why care about repositories

- Part of the PS ecosystem
- Easy and convenient, well established
- Pros and Cons in utilization of built-in PSGallery



Why having an internal repository

- Air gapped systems
- Own modules / internal code
- Control
- Compliance

Type of repositories

Repo flavors

Share based

- Easy to do (relatively)
- No additional software required
- PSGetV2 compatible
- Limited scale
- Access control based on SMB/NTFS permissions
- Potential authentication challenges

Web based

- More flexible
- Statistics and content info's
- Larger scale
- Access control is web-based (API-Keys, SAML, …)
- Requires additional Software on Prem or SaaS
- Potential requirement of PSGetV3

Repo flavors - examples

Share based

- Windows File Services
- NAS systems

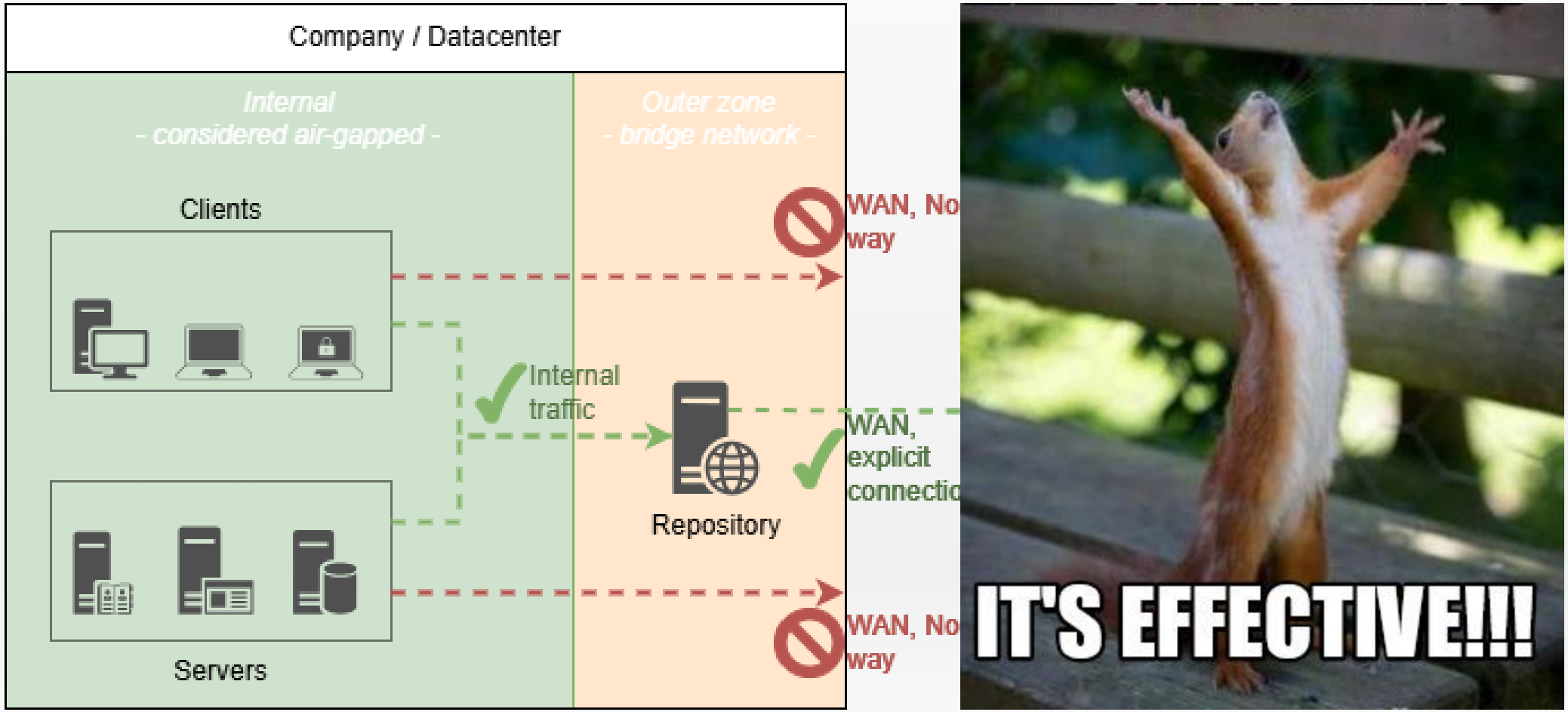
Web based

- NuGet Repositories
  - PSGallery
  - NuGet.org
  - Artifactory
  - Nexus Repository Manager
  - ProGet
- Azure Artifacts*
  - Azure DevOps
  - Azure Container Registry

*) requires PowerShellGetv3

Designing a Solution

Architecting a solution



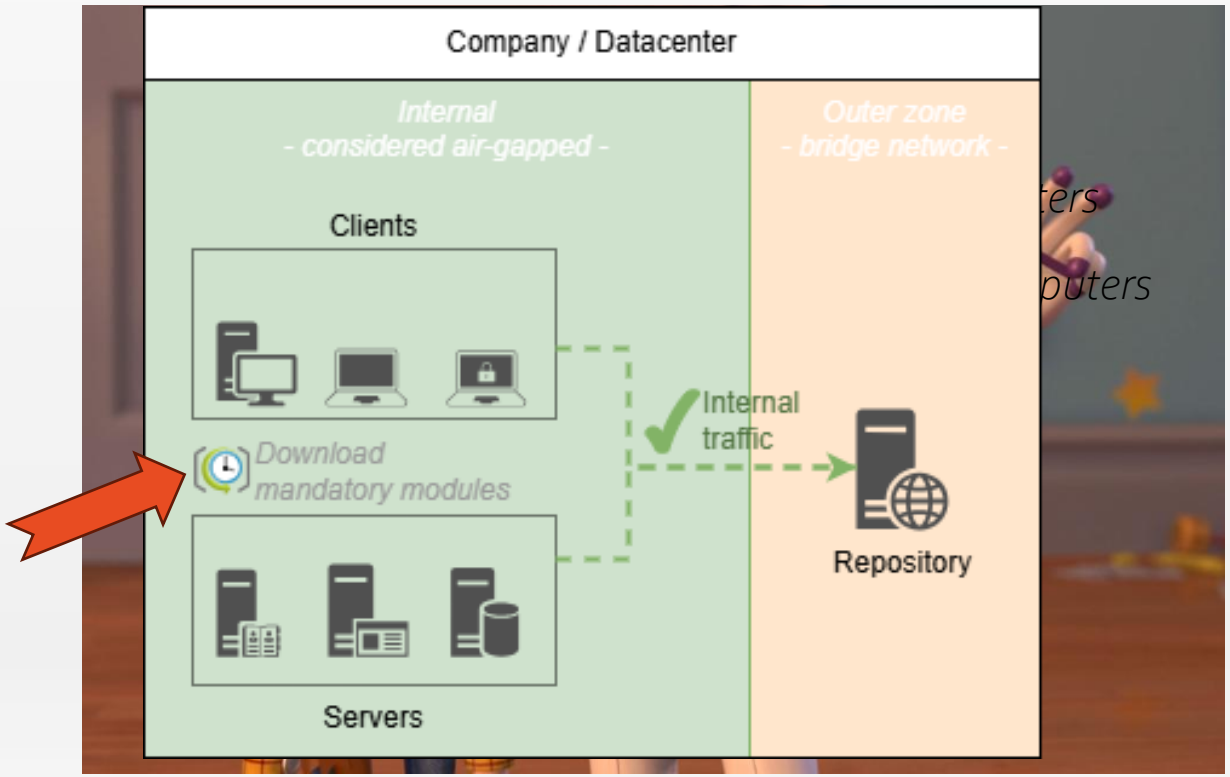
Making an -internal- repo effective

Various perspectives - why effective?

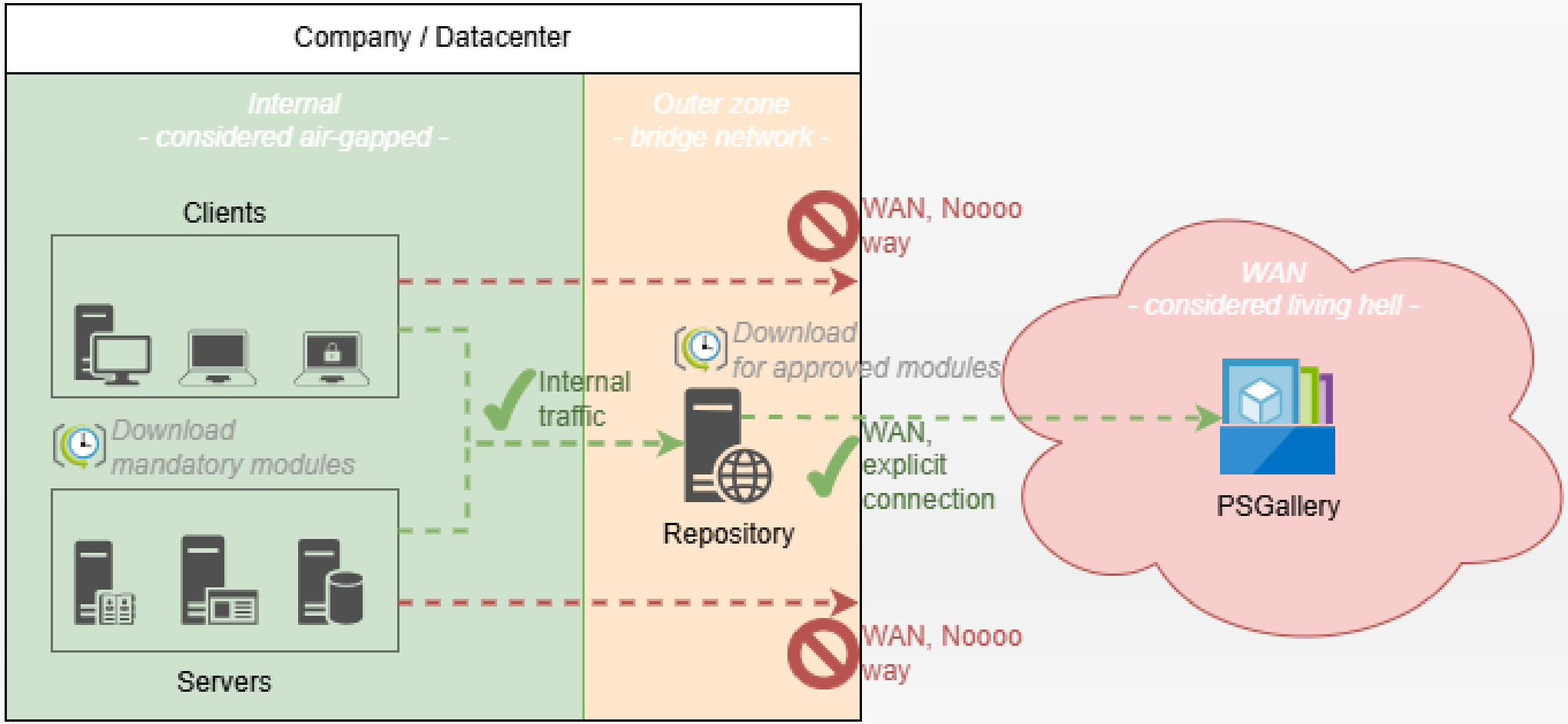
- Efficiency/convenience vs. Effectiveness
- Necessarily
  - Having it, does not mean knowing it
  - Knowing it, does not mean using it

Components for effectiveness

- The Backend to serve your clients
  - Proxy system
  - Approved modules list
  - Download task
- Something for your "Customers"
  - Embrace the SystemProfile
  - Deployment rules
  - Update task



The full picture



Conclusion

- Caring about PSGallery may be worth a consideration
- Distribution of own modules and Updates across the environment easier
  - Consider breaking changes in module Updates!
- Building a Repo on a server is only half of the story
  - Bring it to your customers!
- You can start small without additional cost and software
- Be advised, PS5 and PS7 are different products
  - They also have different repositories and module directories

Question & Answers

Resources

- https://learn.microsoft.com/en-us/powershell/gallery/how-to/working-with-local-psrepositories
- https://inedo.com/proget
- https://devblogs.microsoft.com/powershell/psresourceget-is-generally-available
- https://devblogs.microsoft.com/scripting/understanding-the-six-powershell-profiles

– Thank you –

Andreas Bellstedt

 @AndiBellstedt

 github.com/AndiBellstedt